PTO/SB/80 (12-03)
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XF	Practitioner(s) named below (if more than ten patent practi	itioners are to be named, th	nen a customer number must be used):			
ſ	Name		Registration Number			
-	Obsistanta P. Hamia	42.660				
}	Christopher P. Harris	43,660 39,334				
<u> </u>	Gary J. Pitzer	39,334				
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as atto	rney(s) or agent(s) to represent the undersigned before th	e United States Patent and	Trademark Office (USPTO) in connection with			
any an attache	d all patent applications assigned only to the undersigned only to the undersigned to this form in accordance with 37 CFR 3.73(b).	according to the USP10 a	assignment records or assignment documents			
Assig	nee Name and Address:					
Ū		•				
	Northrop Grumman Corporation					
	1840 Century Park East					
	Los Angeles, California 90067-2199					
A co	py of this form, together with a statement u	nder 37 CFR 3.73(b)	(Form PTO/SB/96 or equivalent) is			
requi	red to be filed in each application in which	this form is used. T	he statement under 37 CFR 3.73(b)			
may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of						
	rney isto be filed.	· ·				
	SIGNATURI The individual whose signature and title is su	E of Assignee of Record applied below is authorized	to act on behalf of the assignee			
Name	Terry J. Anderson					
Signat			Date 5/14/04			
Title	Senipr Corporate Counsel		Telephone / 310.332.5666			
**************************************	Westing of information of required by 37 CER 131 and 133. The i	information in inquired to obtain	l			

Inis collection of information of required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for deducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandri, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

PTO/SB/122 (09-03)

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## **CHANGE OF CORRESPONDENCE ADDRESS Application**

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CHANGE OF	Application Number	10/773,072
RESPONDENCE ADDRESS	Filing Date	4 February 2004
Application	First Named Inventor	Brent T. Toland
ress to:	Art Unit	unknown
missioner for Patents  Box 1450	Examiner Name	unknown
andria, VA 22313-1450.	Attorney Docket Number	NG(ST)7618

Please change the Correspondence Address for the above-identified patent application to:  Customer Number:  OR						
Firm or Individual Name	Christopher P. Harris					
Address	Tarolli, Sundheim, Covell & Tummino LLP					
Address 526 Superior Avenue, Suite 1111						
City	Cleveland	State	ОН		Zip	44114-1400
Country	USA					
Telephone	216.621.2234	Fa	Fax 216.621.4072			
This form cannot be used to change the data associated with a Customer Number. To change the data associated with an existing Customer Number use "Request for Customer Number Data Change" (PTO/SB/124).  I am the:  Applicant/Inventor  Assignee of record of the entire interest. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).  Attorney or Agent of record. Registration Number 43,660  Registered practitioner named in the application transmittal letter in an application without an executed oath or declaration. See 37 CFR 1.33(a)(1). Registration Number						
Typed or Printed Name Christopher P. Harris						
Signature Christoph P. L						
Date 4/13/05 Telephone 216.621.2234						
NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.						
Total of forms are submitted						

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PTO/SB/96 (08-03)

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Entitled: Increased Ultra Wideband (UWB) User Capacity Transmitter Ultizing Time and Frequency Reuse Approaches  Northrop Grumman Corporation (Name of Assignee)    Corporation	Applicant/Patent Owner: Brent T. Toland,	Barry R. Allen, Gerald R. Fischer
Nonthrop Grumman Corporation	Application No./Patent No.: 10/773,072	Filed/Issue Date: 4 February 2004
(Name of Assignee)  (Type of Assignee, e.g., corporation, pathership, university, government agency, etc.)  states that it is:  1. ☐ the assignee of less than the entire right, title, and interest; or  2. ☐ an assignee of less than the entire right, title and interest.  The extent (by percentage) of its ownership interest is	Entitled: Increased Ultra Wideband (UWB	) User Capacity Transmitter Utlizing Time and Frequency Reuse Approaches
(Name of Assignee)  (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)  states that it is:  1. ☐ the assignee of less than the entire right, title, and interest; or  2. ☐ an assignee of less than the entire right, title and interest.  The extent (by percentage) of its ownership interest is	Northrop Grumman Corporation	. a corporation
1. ☑ the assignee of the entire right, title, and interest; or 2. ☐ an assignee of less than the entire right, title and interest.  The extent (by percentage) of its ownership interest is	(Name of Assignee)	
The extent (by percentage) of its ownership interest is	states that it is: 1.	e, and interest; or
In the United States Patent and Trademark Office at Reel 014968 Frame 0990, or for which a copy thereof is attached.  OR  B. [] A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below.  1. From: To: To: The document was recorded in the United States Patent and Trademark Office at Reel Frame or for which a copy thereof is attached.  2. From: To: The document was recorded in the United States Patent and Trademark Office at Reel Frame or for which a copy thereof is attached.  3. From: To: To: The document was recorded in the United States Patent and Trademark Office at Reel Frame or for which a copy thereof is attached.  [] Additional documents in the chain of title are listed on a supplemental sheet.  [] Copies of assignments or other documents in the chain of title are attached. [NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]  The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.    Mathematical Christopher P. Harris   Typed or printed name   Typed or printed n	The extent (by percentage) of its of	wnership interest is ———— %
B. [ ] A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as shown below:  1. From:	A. [/] An assignment from the inventor(s in the United States Patent and Traattached.	s) of the patent application/patent identified above. The assignment was recorded ademark Office at Reel 014968 , Frame 0299 , or for which a copy thereof is
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The document was recorded in the United States Patent and Trademark Office at Reel, Frame, or for which a copy thereof is attached.  2. From:		, of the patent application/patent identified above, to the current assignee as shown
Reel, Frame, or for which a copy thereof is attached.  2. From: To:		
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The document was recorded in the United States Patent and Trademark Office at Reel, Frame, or for which a copy thereof is attached.  [ ] Additional documents in the chain of title are listed on a supplemental sheet.  [ ] Copies of assignments or other documents in the chain of title are attached.  [ [NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]  The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.	3. From:	To:
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[ ] Copies of assignments or other documents in the chain of title are attached. [NOTE: A separate copy (i.e., the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]  The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.    Christopher P. Harris		
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Christopher P. Harris  Date Typed or printed name  216.621.2234 Chuyth R. Chuy	[NOTE: A separate copy (i.e., the or must be submitted to Assignment Di	iginal assignment document or a true copy of the original document) ivision in accordance with 37 CFR Part 3, if the assignment is to be
Date Typed or printed name  216.621.2234 Chulph P. Bu	The undersigned (whose title is supplied	below) is authorized to act on behalf of the assignee.
Date Typed or printed name  216.621.2234 Chulph P. Bu	4/13/05	
	Date	
Telephone number Signature	216.621.2234	Christ P. Ch
	Telephone number	Signature
Attorney of Record		

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.